

Food Safety Knowledge, Training and Practice among Food Pantry Volunteers in Franklin County, OH

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I. Abstract

Food insecurity is a persistent issue in the United States, and especially in Ohio where rates of food insecurity and very low food security are above the national average. Food distribution organizations (FDOs), commonly known as food banks and food pantries, are charitable organizations that play an important part in getting food into the hands of the food insecure. FDOs are subject to the same food safety laws and regulations as food retailers or restaurants despite having significant differences in their operational structures, namely the utilization of volunteers. Previous research in North Carolina has studied food safety in FDOs, and this study aimed to provide a snapshot of practices in Central Ohio. Qualitative data analysis was used to examine how utilization of volunteer workers may affect the food safety environment in food pantries. Results show that pantries rely on a system of ‘trickle-down’ knowledge in order to ensure food safety. Additionally, operational changes made in food pantries in response to the Covid-19 pandemic were explored and some challenges with new drive-up service models are described.

II. Introduction

1. Food Insecurity in the US

Food insecurity is defined as difficulty in providing enough food for all members of a household due to lack of money or other resources. Very low food security is a subcategory of food insecurity where one or more members of a household where food intake is reduced at times during the year due to limited resources. The economic impact of the Covid-19 pandemic has caused food insecurity to rise throughout the country. Feeding America, the national organization food banks, estimates the nationwide food insecurity rate to rise by 4.1% in 2020 (Hake, et al., 2020).

While the increase is striking, food insecurity is a persistent issue in the United States. Since the United States Department of Agriculture Economic Research Service (USDA ERS) began collecting data in 1995, the national rate of households reporting food insecurity has not fallen below 10% (2020). Ohio is one of 11 states where the prevalence of food insecurity is higher than the national average, and is also among 9 states whose rates of very low food security was higher than the national average (USDA ERS, 2020).

Many of the food insecure rely on government programs such as the Supplemental Nutrition Assistance Program (SNAP) and Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), but these have strict guidelines for who qualifies to receive aid. Both the SNAP and WIC programs are under the management of USDA’s Food and Nutrition Service

(FNS), but households who fall outside the programs' requirements rely upon charitable food distribution organizations (FDO) to meet their needs.

2. Charitable Food in the US

FNS supports distribution of food to FDOs through The Emergency Food Assistance Program (TEFAP) and Commodity Supplemental Food Program (CSFP). With these programs, USDA purchases and distributes emergency food aid to FDOs. Both programs are administered through the same organizational network and distribute similar foodstuffs, but CSFP foods are only be distributed to citizens at least sixty years old. These programs are different than SNAP and the WIC because they provide foodstuffs directly to those in need, rather than providing vouchers for specific foods to be purchased by individuals themselves. (factsheets, website, white paper). After the USDA purchases commodities from vendors (grocery manufacturers, growers, shippers), the foods are made available to State Distributing Agencies, in Ohio it is the Department of Job and Family Services (ODJFS), and enter the Feeding America network. Feeding America is a national organization of foodbanks responsible for disbursement and distribution of donated foods (Food Recovery Committee, 2016). The central Ohio Feeding America representative is the Mid-Ohio Food Collective (MOF). While the Mid-Ohio Food Collective does distribute USDA commodities to clients, they are required by the ODJFS to be able "to obtain non-USDA items and food resources to supplement USDA food products" (Ohio Department of Job and Family Services, 2012).

Foodbanks in general are nonprofits which "maintain an established operation involving the provision of food and grocery products to food pantries, soup kitchens etc." They differ from food pantries by the fact that although they may distribute food directly to clients, they more commonly disburse food to pantries, soup kitchens or homeless shelters to be distributed to their clients. Since they both distribute food directly to clients and disperse to other organizations, they are considered Food Distribution Organizations (FDO) by ODJFS. (Ohio Department of Job and Family Services, 2012)

3. Food Safety in FDOs

Feeding America requires members of its network to adhere to the same food safety standards as grocery retailers, food manufacturers and restaurants (Mid-Ohio Foodbank, 2018). These standards are laid out in US Federal Law in what is commonly known as the Food Code, though there is no specific mention of donated food in the Code. Despite sharing regulatory guidelines, there are notable differences between the way in which food is distributed by FDOs and the way that food is distributed in retail establishments, including use of volunteer labor, difficulty of traceability because of various donors, the distribution of close-to-date foods, and liability for illness caused (Connecticut Food Bank, 2015; Milicevic, et al., 2016).

Previously, much of the legal discussion around food donations and food safety has focused on the liability of donors for illness caused by their donations, with the 1996 Bill Emerson Act relieving donor agencies from such responsibility (Haley & Civita, 2013). Recent documents on food safety in FDOs have shifted focus from liability to reduction of food waste as the paradigm

by which food safety in FDOs is approached (Food Recovery Committee, 2016; Leib, Chan, Hua, Nielsen, & Sandson, 2018). Whether clients of FDOs are more susceptible to foodborne illness than other populations, or whether FDOs and retail food establishments in areas of low socioeconomic status have adequate resources to ensure safe food handling are unanswered questions (Quinlan, 2013).

Chaifetz and Chapman (2015) examined the standard operating procedures for foodbanks and pantries in North Carolina using semi-structured interviews with managers and site visits. They found that volunteer labor was crucial to operation of the agencies (80.2% reported needing regular volunteers), and that these volunteers had important responsibilities including quality and safety evaluation (in 90% of FDOs) and receiving then storing food (77.2%). Despite playing such a crucial role in day-to-day operation and ensuring safe food is received and distributed, the researchers found that only 41.2% of volunteers had undergone any training that included food safety. This illustrates a gap in practice where volunteers are expected and entrusted with evaluating foodstuffs but may not be given proper training in order to do so in a safe manner.

A review of state legislation, regulation and guidance specific to donated foodstuffs found that only twelve states have any type of governmental advice or requirement for the handling of donated foods (Leib, Chan, Hua, Nielsen, & Sandson, 2018). In the report, officials from the Ohio Department of Health and of Agriculture (the two entities responsible for policing donated food in the state) responded that model language would be helpful in creating food safety for food donation guidance would be helpful. Only one state, Texas, has language specific to donation of food in its legislative code. (Texas Administrative Code 25-1-228.83) Ohio specifically has guidance only for school share tables, locations in lunchrooms where students can leave unopened extra foods for their classmates. (OH Food Safety Code 3717-1-03.2(X))

In both Leib et al. (2018) and in their guidance on school share tables, Ohio officials refer to the Comprehensive Resource as the primary document used to form food safety policy for food donations in the state (Ohio Dep'ts of Health & Agriculture, 2017). The fact that the document is written for food retailers and manufacturers may make it an ineffective way of communicating and ensuring food safety in charitable FDOs because of the organizational differences noted earlier.

The purpose of this research is to build upon and provide another application of the North Carolina study by providing data on food safety practices by volunteers in FDOs in Franklin County, Ohio.

III. Materials and Method

1. Sample Selection

Franklin County was chosen as the research area because it includes many FDOs within different municipalities, the county includes both urban and rural areas by seven out of nine of USDA ERS's definitions, and it is the most populous county in the state. In terms of food insecurity, the county has a rate approximately five percentage points higher than the state average (Joy, Dynia,

Bates, Salsbery, & Justice, 2018). A list of food pantries in Franklin County was compiled using a general Web search, material from the Mid-Ohio Food Collective's website, and a listing compiled by HandsOn Central Ohio. HandsOn is a website created by Lutheran Social Services to index agencies that provide emergency aid to those in need.

After identifying 47 food pantries in the county, pantries were purposively selected from this list for this study based on three criteria: 1) the pantry's location in an urban or rural area to sample pantries from both areas; 2) the pantry's service area population size, with the goal to sample pantries with both large and small service operations; and 3) updates on each pantry website about their activity during Covid-19 to determine if the pantry was active and operational.

Within the county, urban and rural areas were based on definitions from the USDA Economic Research Service. Rural areas are those outside of census-designated places having a population of greater than 2,500 people (census places are unincorporated areas that are delineated for census counting). Service area population was calculated using Zip Code Tabulation Areas and service area information as reported on each pantries' website. The purposive sampling method aimed to select a sample reflecting both large and small service areas and from urban and rural areas of Franklin County.

2. Participant Recruitment

Participant food pantries were contacted in August and September 2020 by phone and by email following a script. If no response was initially received, two follow-up attempts were made before removing the pantry from the contact list. Information about the study, including its focus on food safety and expectations of the participants, was communicated in the script.

Of the 21 pantries contacted, three pantries indicated they did not wish to participate because of a lack of time with increased service in previous months. Eight did not respond to emails or phone calls, suggesting inactivity or incorrect contact information. Therefore, 10 pantries were surveyed, or a 48% response rate.

3. Research Using Human Subjects

All research methods were reviewed and determined exempt by the Institutional Review Board at the Ohio State University. Confidentiality was ensured by not recording personally identifying information about each individual participant and by storing all data on a password-protected device. As per the approved protocol, informed consent was received verbally, and the participants had the option to skip any questions or conclude the interview at any point. All pantries agreed to conduct the interview in-person, at the pantry, and the participant chose the location of the interview in each case. It was the goal of the interviewer to create an environment of honesty and trust by displaying genuine interest and understanding of the food pantry's work. Researchers also followed public health protocols necessary to prevent the spread of Covid-19 by wearing masks and maintaining at least six feet of distance during each interview.

4. Data Collection

A survey questionnaire based on Chaifetz & Chapman's (2015) study was developed (Appendix) and Qualtrics was used by to collect data during the verbal interview. During the interviews, one researcher would actively engage with the participant and record answers in Qualtrics; the other researcher would take free-hand notes of participant responses to open-ended questions and any additional information they offered in the conversation. Participants from the food pantries were asked questions on the following topics: 1) regularity of volunteers 2) volunteer tasks 3) types of foods distributed 4) use of past-date foods and 5) volunteer training. The specific questions asked are included in the appendix.

After completing of the interview, researchers conducted a walkthrough of the food pantry operations with the manager participant. During the walkthrough the researchers used their own foodservice experience and ServSafe knowledge to observe basic food handling practices (i.e. storage temperatures, placing food on floor, FIFO). Walkthroughs were performed in an organic way and no standardized form was used. This approach allowed researchers to freely observe and ask questions without changing volunteers' behavior if they felt they were being evaluated.

5. Data Analysis

The data was analyzed manually using best practices for qualitative data analysis (Corbin & Strauss, 2015). Themes were identified based on the initial survey topics above. Content from the surveys and notes were coded to fit each theme, and specific language used by the respondents was also coded into the appropriate theme. From this analysis, themes and topics consistently referenced and mentioned by each respondent were identified and used for results and discussion.

IV. Results

1. Organization

A total of ten food pantries were surveyed. In terms of location, two pantries were located in rural areas, three in suburban and the remaining five were located in urban areas as defined by USDA ERS. The actual buildings the surveyed pantries were housed in varied widely, with two located in strip malls, some in their own standalone buildings, and others in church buildings.

During the interviews, pantries reported serving between 120 and 600 households per week; three pantries offered data from the Mid-Ohio Food Collective's (MOF) website that tracks the number of clients they had served each day, week and month. All respondents reported an increase in both new families and total families served during the months of April and May, with the influx being due to job loss and financial hardship caused by the Covid-19 pandemic. All but one pantry reported that this increase in clients had sustained until the time of the data collection (September and October).

Types of foods the respondents reported distributing are shown in Figure 1. All pantries distributed similar foods, including frozen meat and poultry, fresh produce and canned goods. All ten pantries interviewed reported receiving a majority of their food directly from MOF, and the remaining came from grocery store pickups that were brokered through the Collective. Only

one respondent said their pantry received food from an organization independent of the Collective.

Nine of the respondents were directors at the pantry (responses included executive director, director of marketing and development, and assistant director of food and nutrition); one respondent was an operations manager. Nine of the respondents reported having completed ServSafe Level 1 training (as required by MOF), while the one who did not report completion of this food safety course did say they had completed some type of food safety training, though they were unable to remember the name. If they needed more information or had a question, most respondents said they would go contact MOF for advice. (Figure 2) Seven of the respondents said they directly supervised the volunteers at their pantry during their shift; the other three had interaction with the volunteers, but did not have the responsibility of supervising volunteer tasks.

Respondents said that the age of their volunteer based varied widely, but seven said that retirees or volunteers older than fifty made up the core of their volunteer staff. All but one pantry said that their volunteers were regular, that they knew the people who would be coming in the door to help each day. Two pantries relied on large groups of volunteers (e.g. corporate service days, school groups) to perform everyday tasks. All pantries reported their typical volunteer shift to last between two and four hours, and all but three pantries said they operated with approximately 10 volunteers per shift.

2. Volunteer Tasks

Tasks that pantries relied on volunteers to perform, and the frequency with which they were reported, are shown in Figure 3. Volunteers were in charge of important tasks like evaluating shipments for safety or quality and managing stock. Volunteers were also primarily in charge of interacting with clients, collecting food items into boxes to be distributed, and using personal vehicles to pick up or deliver donations.

Only one respondent said they had written checklists to track completion of tasks at the pantry, and others reported that managers would personally check tasks to ensure they had been completed correctly. When asked how they coach volunteers when a task had been completed incorrectly, most respondents said it was not an issue because, in the words of one respondent, “most volunteers are tasked with low-level tasks that do not need quality assurance.” Remedies offered by other respondents included asking the volunteer to end their service or correct and build understanding in the volunteer.

3. Volunteer Training

Informal, at-task training for volunteers was the norm in all pantries surveyed. (Figure 4) The training was almost exclusively administered by other, more veteran volunteers at the pantry and not by the directors who had completed ServSafe training. Three of the 10 pantries reported having time outside of normal service for onboarding and training new volunteers, though the training did not include food safety at these three pantries. At one pantry, the training covered poverty and hunger statistics; privacy policies were explained at a second; the third pantry required volunteers to complete Protecting God’s Children, a training to protect against child

abuse. Only one pantry had a written manual for volunteers, though this manual did not include any mention of food safety.

One respondent described the way that pertinent information is communicated to new volunteers as “trickle-down knowledge.” Another repeatedly cited “institutional knowledge” of the volunteers as the most important way food safety was ensured at the pantry. A third respondent drew a clear distinction between “empowerment” and “babysitting,” describing how the “volunteers are the real people that run the [pantry]” and should be trusted to complete their tasks correctly. Nine respondents believed that the current volunteer training model, instituted at the pantry level, was sufficient in order to ensure food safety. (Figure 5)

The trust given to volunteers in completing tasks was also extended in pantries’ protocol for sick volunteers. One respondent said that they knew the volunteers “want[ed] to do the right thing” and would not come into the pantry if they were sick. Four respondents who completed ServSafe training said that they went to the MOF AgencyZone or to their MOF representative to answer questions on food safety, and that these resources were always sufficient to answer their questions.

4. Changes in Regard to Covid-19

Pantry operation changes in response to Covid-19 are summarized in Figure 6. All pantries have changed to a drive-thru model since the Covid-19 pandemic. In this model, volunteers collect food item into boxes and then place them in the trunk or back seat of the clients’ car instead of clients entering the pantry and choosing the foods they receive. Respondents noted three primary challenges with this model: the threat of inclement weather impacting the volunteers’ ability to be outside, goods being held out of refrigeration while they were staged in boxes before distribution, and a reduction in clients’ choice in the food they receive. All pantries visited required masks to be worn by volunteers, though two waived this requirement for clients visiting the pantry since they remained in their cars and had little interaction with the volunteers. One pantry took temperatures of volunteers when they arrived for their shift each day. Three pantries no longer allowed elderly volunteers to enter the building in order to volunteer because of their risk to severe complications if contracting the disease.

5. Researcher Observations

Though most pantries were observed having good food safety practice, there were practices at some pantries not in line with ServSafe or MOF requirements. Most notably, one pantry stored eggs and milk at approximately 60°F, far above the requirement of 41°F. At another pantry, the manager showed the researchers bags of cut lettuce that had been received hours earlier but had been left unrefrigerated. All respondents made it a point to locate and show handwashing stations, and all refrigerators and freezers were observed having up-to-date and clearly visible temperature logs.

V. Discussion

The reliance on volunteers older than fifty by the pantries surveyed could point to significant issues in their regularity, especially during the Covid-19 pandemic. The fact that older

populations were advised to stay at home and limit their contact with others would mean they are unable to volunteer at the pantry. Furthermore, some pantries explicitly told elderly volunteers to not come in to volunteer due to risk of exposure. Because these older volunteers were often the veteran workers who would be at the top of the “trickle-down” system and training new volunteers, their absence could create a gap in the institutional food safety knowledge at the pantry.

Managers and directors were hesitant to institute rigid training protocols or expectations for volunteers, citing the difference between employment and volunteer service. The respondents did not want to overburden the volunteers at risk of scaring them away from working in the pantry at all. All respondents saw the informal, at-task training as sufficient to ensure food safety at their pantry. This could suggest there is an opportunity to create succinct food safety training materials, such as videos or pamphlets, directed toward volunteers themselves to ensure they have the knowledge necessary to evaluate shipments and manage stock. Because the respondents primarily reported relying on the Mid-Ohio Food Collective for food safety information, this material should be developed or distributed in collaboration with the Collective to ensure furthest reach.

The drastic changes to food pantry models instituted in response to the Covid-19 pandemic reduce the amount of choice available to clients and may cause them to receive foods they do not prefer or do not eat. This would run contrary to a commonly-expressed desire of the emergency food system to redirect waste from other foodservice institutions.

Further research could be focused on examining a connection between volunteer demographics and food safety practice, as there is a possibility that older populations have different food safety knowledge or practice than what is currently considered best practice.

Figures

Figure 1. Types of foods distributed.

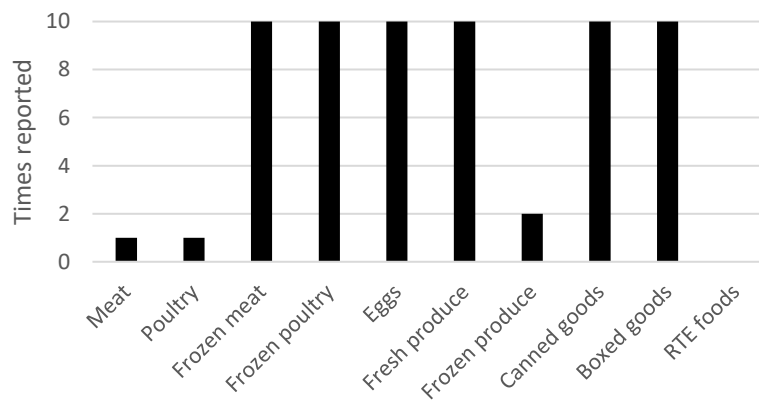


Figure 2. Where respondents seek advice or information on food safety.

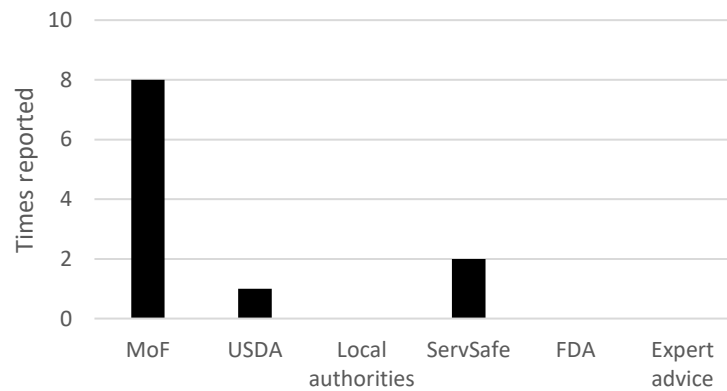


Figure 3. Volunteer tasks.

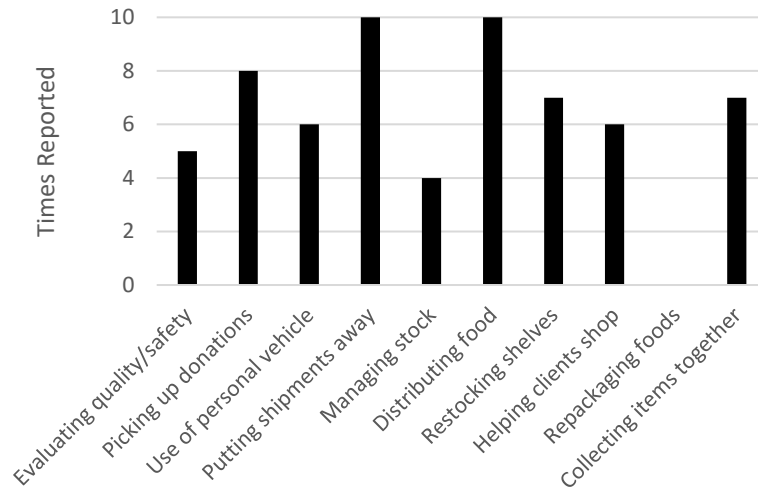


Figure 4. How volunteers are trained.

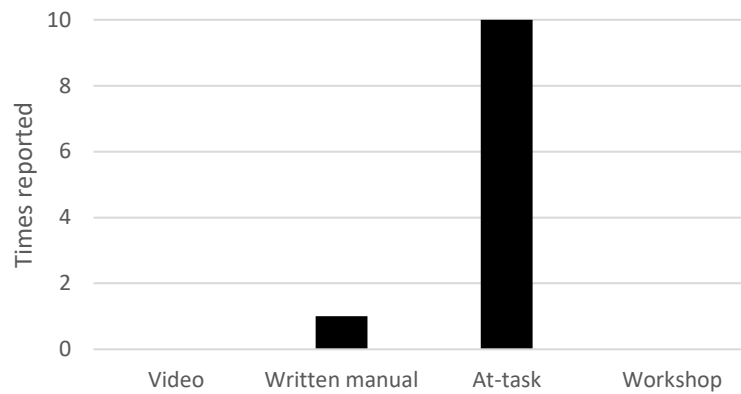


Figure 5. Responses to “What level of volunteer training is sufficient?”

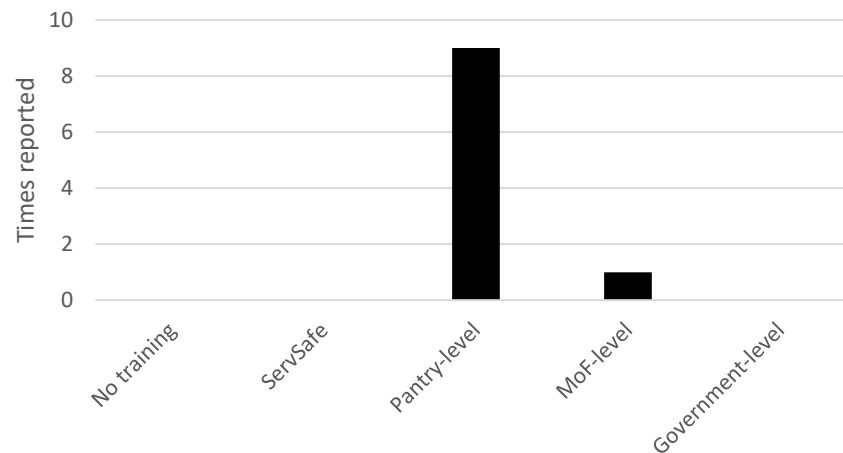
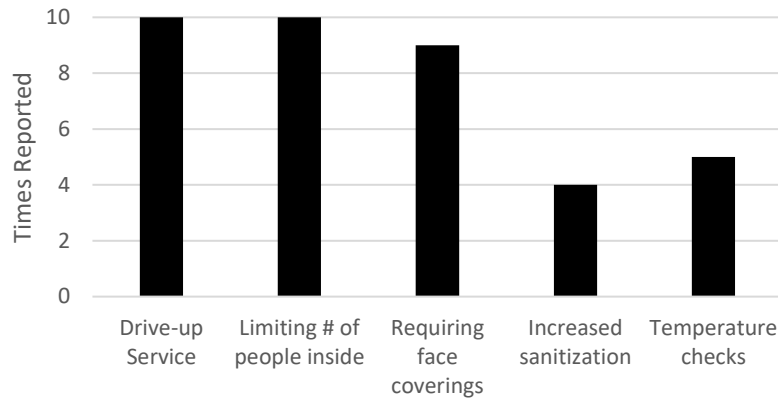


Figure 6. Changes in response to Covid-19



Bibliography

- Chaifetz, A., & Chapman, B. (2015). Evaluating north carolina food pantry food safety-related operating procedures. *Journal of Food Protection*, 78(11), 2033-2042. doi:10.4315/0362-028X.JFP-15-084
- Connecticut Food Bank. (2015, August). Food safety training for pantries. Retrieved from <http://www.ctfoodbank.org/agency-tools/agency-resources/food-safety/>
- Corbin, J., & Strauss, A. (2015). *Basics of Qualitative Research*. SAGE.
- Food Recovery Committee. (2016). *Comprehensive resource for food recovery programs*. Conference for Food Protection.
- Hake, M., Dewey, A., Engelhard, E., Strayer, M., Harper, T., Summerfelt, T., . . . Gundersen, C. (2020). *The impact of the Coronavirus on food insecurity in 2020*. Feeding America. Retrieved from https://www.feedingamerica.org/sites/default/files/2020-10/Brief_Local%20Impact_10.2020_0.pdf
- Haley, J., & Civita, N. (2013, June). Food recovery: a legal guide. University of Arkansas.
- Joy, E., Dynia, J., Bates, R., Salsbery, P., & Justice, L. (2018). *Food insecurity among low-income families with young children*. Columbus, OH: Ohio State University.
- Leib, E. B., Chan, A., Hua, A., Nielsen, A., & Sandson, K. (2018). *Food safety regulations & guidance for food donations: a fifty-state survey of state practices*. Food Law and Policy Clinic. Cambridge MA: Harvard Law School.
- Mid-Ohio Foodbank. (2018, February). *Agency Handbook*. Retrieved from Mid-Ohio Foodbank: <https://www.midohiofoodbank.org/wordpress/wp-content/uploads/2018/02/MOF-Agency-Handbook-Feb-2018.pdf>

- Milicevic, V., Colavita, G., Castrica, M., Ratti, S., Baldi, A., & Balzaretti, C. M. (2016). Risk assessment in the recovery of food for social solidarity purposes: preliminary data. *Italian Journal of Food Safety*, 5, 234-238.
- Ohio Department of Job and Family Services. (2012, February). Food programs manual for the commodity supplemental food program and the emergency food assistance program. Ohio. Retrieved January 28, 2020, from <http://jfs.ohio.gov/ofam/foodstamps.stm>
- Ohio Dep'ts of Health & Agriculture. (2017, June). Guidance for school share tlabels.
- Quinlan, J. (2013). Foodborne illness incidence rates and food safety risks for populations of low socioeconomic status and minority race/ethnicity: a review of literature. *Environmental Research and Public Health*, 10, 3634-3652.
- USDA ERS. (2020, September 09). *Food Security in the U.S.: Key Statistics and Graphs*. Retrieved from Economic Research Service.

Appendix

Survey Questionnaire Used for Interviews

Question	Subquestions
Please describe the FDO.	Name, address How many clients are served per week? What is the FDO's service area? What requirements are there for clients to receive food from your FDO?
Please describe your position at the FDO.	Are you the manager of the pantry? Are you the manager of the volunteers? Is your position paid or unpaid? Do you directly supervise volunteers during their shifts? If not, who does? Were you trained to manage the volunteers? Have you received any food safety or food handling training? Specific to FDOs?
Are the volunteers regular or do they change often?	How many volunteers are there per shift? How long is a volunteer shift? What is the age range of volunteers?
What are the kinds of tasks that volunteers fill at your food pantry?	Are there written descriptions for different positions? Can you provide or explain them? Are there standard operating procedures for each task? Are volunteers responsible for the intake of donations? Do volunteers determine the quality of donations? Whether to accept or not?

	<p>Do volunteers pick up foods from other locations and deliver them to the pantry?</p> <p>Do they use their own vehicles to do so?</p>
How do you keep track of volunteers and their jobs at the food pantry?	<p>Is there a sign-in sheet for each shift?</p> <p>Is there a screening process/application to become a volunteer? What questions are asked?</p> <p>Are the volunteers trained? In what? Is there a written manual?</p> <p>Is there a protocol for sick volunteers?</p> <p>How do you keep track of completion for these tasks?</p>
What kinds of foods do you distribute?	<p>Time/temperature control? Ready-to-eat? Past date?</p> <p>Are foods repackaged at the pantry?</p>
Does the pantry have particular requirements for its suppliers?	<p>Does your food pantry receive food from the Mid-Ohio Foodbank?</p>
Do you know when a donation will be made?	
Where do you look for information regarding food safety in your pantry?	<p>Does the information you find meet the FDO's needs?</p> <p>Where could additional guidance or regulation be useful?</p>
How did your FDO operations change in response to the Covid-19 pandemic?	<p>Have you considered a drive-by only model?</p> <p>Do you require face covering for clients or volunteers?</p> <p>Have you updated your written training procedures or SOPs?</p>